

Closing the Skills Gap



One State at a Time

By Val Zanchuk

New Hampshire's "65 by 25" post-secondary education goal is a model that other states and manufacturing sectors can use to improve the educational attainment of the next-generation workforce.



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IN 2009, LUMINA FOUNDATION, THE NATION'S LARGEST PRIVATE foundation focused solely on increasing Americans' success in higher education, undertook an analysis of data, including information from the Organization for Economic Cooperation and Development, on educational attainment rates in developed countries around the world. Lumina found that the rate in the United States was lower, on average, and that other countries were doing a better job of educating their younger populations.

In this time of global competition, Lumina made the decision to set a goal that would help the U.S. compete more effectively. They set a national goal they believed to be ambitious, but possible and in alignment with rates of other nations: by 2025, 60% of

American adults should have a high-quality, post-secondary degree or credential. Currently, only about 40% of adults have achieved that level of education.

The shortfall not only presents a significant challenge to the manufacturing industry, but also to the nation at large. Informing this goal, the Georgetown Center on Education and the Workforce analyzed the future workforce needs of the country, as well as those for each state, and projected that by the year 2020, 65% of the jobs in the U.S. will require some type of post-secondary training or education.

Since Lumina set the national goal, several states have taken up the challenge and set their own post-secondary goals. New Hampshire is the most recent example. With the support of Lumina Foundation's Strategy Labs, New Hampshire adopted a state-wide attainment goal that 65% of the state's 25- to 64-year old population should hold a high-quality, post-secondary credential or degree by the year 2025.

This effort is more commonly described as "65 by 25."

New Hampshire's 65 by 25 state-wide goal offers an example of how leaders in manufacturing can get industry leaders, educators, and government leaders mobilized around a common purpose and metric that is critical to meeting labor market demands in the next 10 years.

Setting New Hampshire's Goal: 65 by 25.

The New Hampshire Coalition of Business and Education (NHCBE) is a group of top business, philanthropic, and education leaders in the State of New Hampshire that brought about 65 by 25. The coalition was created in 2013 with the commitment to "improving the quality, access, and relevance of education for New Hampshire citizens of all ages."

The process for identifying New Hampshire's goal 65 by 25 serves as an example

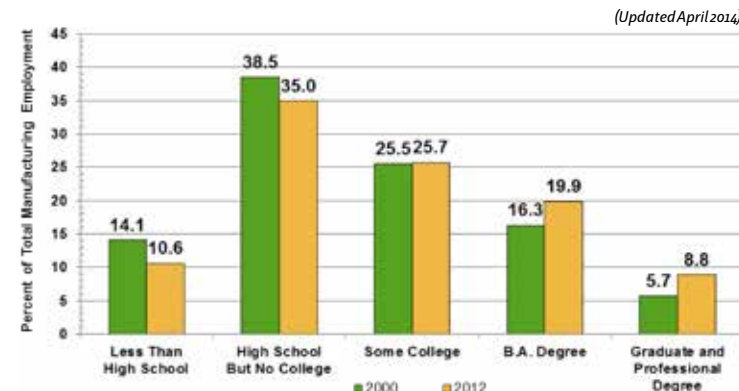
of how the skills gap can be closed one state at a time. The first step in determining the goal for New Hampshire called for business and education leaders to analyze state labor market trends and post-secondary output.

Their main findings included:

- As of 2013, New Hampshire had approximately 204,000 adults with just a high school diploma or equivalent (about 28% of adults), and approximately 141,000 adults with some college and no degree (about 20%).
- The number of K-12 students is declining dramatically in New Hampshire and New England broadly.
- A well-educated population is retiring from the workforce.
- To remain competitive as a state and to satisfy the expected demand among the state's industries, approximately 95,000 additional credentials need to be produced by 2025.

To reach the 65 by 25 goal, important changes need to be made to close the skills gap. First, NHCBE decided to explore three strategies: 1) engage adults with no credentials in the state, 2) improve comple-

The Manufacturing Workforce Has Become More Educated



(Updated April 2014)

Source: Georgetown Center on Education and the Workforce

tion success of those already enrolling in higher education institutions, and 3) retain more high school graduates to attend in-state institutions. Next, workgroups were created to ensure progress, and metrics were established to monitor the progress over the next 10 years.

The progress metrics for 65 by 25 include:

- Supply (credentialed workers), demand (jobs requiring post-secondary education) ratio
- % of high school graduates enrolling immediately after graduating
- % of resident students remaining in-state for college
- Post-secondary completions per 100 full-time equivalents
- Proportion of 25-49 year olds enrolled

The current shortfall in educational attainment rates presents a significant challenge to the manufacturing industry, but also to the nation at large.



(as percent of 25-49 year olds without a Bachelor's degree)

As the recent efforts in New Hampshire illustrate, when business leaders in manufacturing work with industry leaders and educators to set a 10-year goal to meet labor market demands, the skills gap becomes too big to ignore.

The Role of Manufacturing Leadership

In the states that have no 10-year goal, manufacturers need to lead a state effort similar to the one in New Hampshire. In states that have a 10-year post-secondary goal, it is important for leaders in manufacturing, and their statewide industry associations, to become engaged and familiar with the strategies needed to ensure progress is made in reaching the goal.

NHCBE offers leaders in manufacturing three important recommendations on what can be done in every state to close the skills gap. Many of these recommendations are based on the positive steps taken in the New Hampshire 65 by 25 example.

1. Raise awareness about the manufacturing skills gap and the benefits of manufacturing jobs.

Manufacturing is a key industry in every state. State leaders in government and higher education institutions need to be informed about the skills gap the manufacturing sector is facing and the benefits manufacturing jobs bring. For example, Deloitte and the Manufacturing Institute recently produced a report, *The Skills Gap in Manufacturing 2015 and Beyond*, which identifies how the skills gap is widening for manufacturing in the next 10 years. The report's main findings include the following:

- Every dollar spent in manufacturing adds \$1.37 to the U.S. economy, and every 100 jobs in a manufacturing facility creates an additional 250 jobs in other sectors.
- Over the next decade, nearly three and half million manufacturing jobs likely need to be filled and the skills gap is expected to result in two million of those jobs going unfilled. There are two major contributing factors to the widening gap – baby boomer retirements and economic expansion.

Examples like the report above should be brought to the attention of state-wide business organizations and educational institutions, and serve as a call to action.

In addition, it is important for manufacturing leaders to bring attention to the benefits of manufacturing jobs as well. The U.S. Department of Commerce's Economics and Statistics Administration

identifies the important role the manufacturing sector has in creating high quality and high demand jobs. Examples include:

- On average, hourly wages and salaries for manufacturing jobs were \$29.75 an hour in 2010 compared to \$27.47 an hour for non-manufacturing jobs.
- The compensation premium has risen over the past decade across all levels of education attainment.

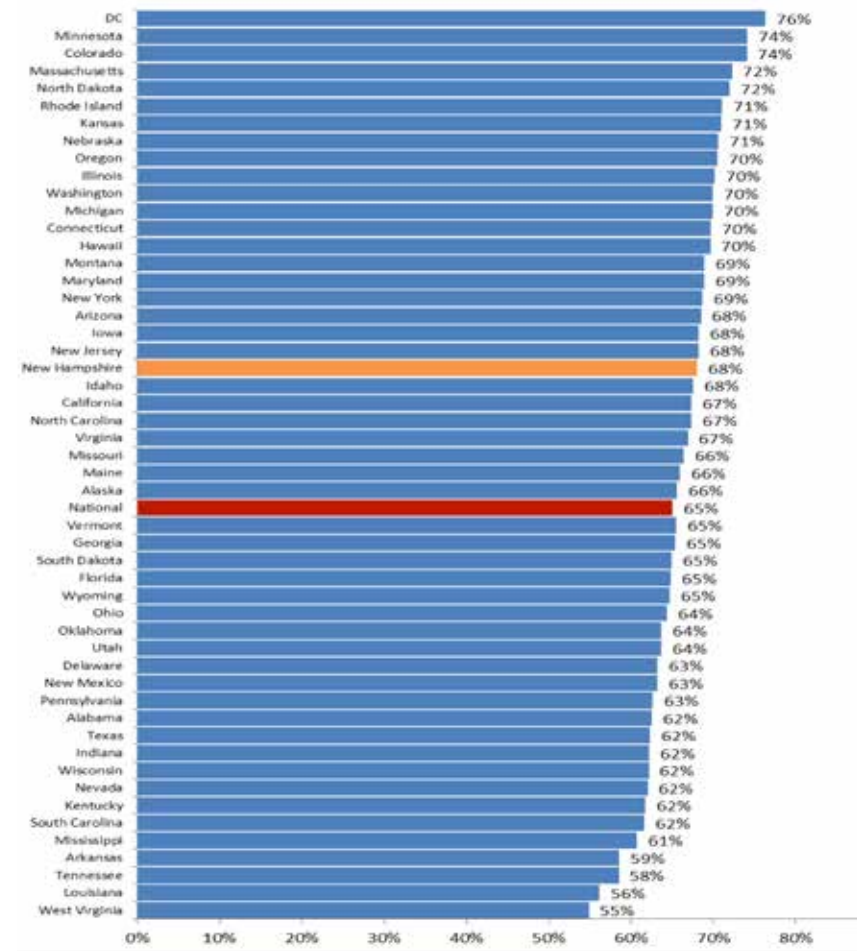
State-based manufacturing associations and corporate manufacturing executives need to make sure state government leaders and higher educational institutions are aware of the labor market demands and opportunities in manufacturing.

2. Strengthen middle skill pathways.

Middle skill workers are commonly identified as those individuals that have more than a high school education but not a four-year degree. Identifying the middle skills gap is critical for any state that sets a 10-year post-secondary attainment goal. In New Hampshire, for example, it is estimated that 49% of job openings between 2012 and 2022 will be middle skill.¹

The need to generate a middle skill workforce is very familiar to manufacturing leaders. Over the last decade, the manufacturing workforce has become

68% of N.H. Jobs Will Require Post-Secondary Education by 2020



Source: Georgetown Center on Education and the Workforce

more educated and the share of the U.S. factory workforce with a high school education or less has declined from 52.6% in 2000 to 45.6% in 2012. That trend is expected to continue over the next 10 years, putting a premium on middle skill workers.

To grow a middle skill workforce, there are five major pathways available in a state's career and technical education system (CTE). They include:

¹ 65 by 25, *Achieving Economic Prosperity Through Post-Secondary Education*, March 2015, Ross Gittel, Community College System of New Hampshire



It is important for manufacturing leaders to bring attention to the benefits of manufacturing jobs, especially their high level of compensation.

1. Employer-based training
2. Industry-based certificates
3. Apprenticeships²
4. Post-secondary certificates
5. Associate degrees²

These pathways are not mutually exclusive and require the type of public and private partnerships very familiar to the manufacturing sector. The manufacturing industry has a long history of success in providing these middle skill pathways and needs to work with higher education institutions to strengthen the CTE infrastructure for future workers to pursue these pathways. Specifically, manufacturers can lead in two important areas:

- Establish a Learning and Earning Exchange that can bring transparency to the relationship between CTE and the labor market.
- Link high school instruction and post-secondary CTE by investing in specific CTE programs of study that integrate high school and post-secondary curriculums with employer-based training.³

It is often the case that the role of career and technical education is underemphasized and underfunded as a part of a state's post-secondary system. Therefore, manufacturers need to have a strong voice in making sure CTE is a vital component in reaching a 10-year state goal.

3. Promote high value certificates.

Post-secondary certificates are expanding rapidly. In response to labor market and educational demands, they have grown from 300,000 awarded in 1994 to

roughly one million in 2010, and have now overtaken both Associate's and Master's degrees as the second most popular post-secondary award after Bachelor's degrees.⁴

While post-secondary certificates carry many advantages, like the reduced time and cost of a college degree, there is no common brand. Therefore, the purpose, recognition, and labor market value varies widely.

To ensure a state is achieving its 10-year, post-secondary attainment goal by including post-secondary certificates, it is important to identify what constitutes a high-value certificate and how they will be counted. Again, New Hampshire has addressed this challenge head on. The state formed a working group that has approved a definition of what is a high-value certificate and is now exploring what sub-associate-level credentials should be counted in its 65 by 25 goal.

Manufacturing leaders can play an important and vital role in ensuring a state post-secondary system is producing high-value certificates. The Manufacturing Institute, for example, has launched the Skill Certification System, which includes a toolkit for designing, identifying, and building a scalable certification system.

In addition, to ensure post-secondary certificates are high quality, manufacturing leaders can also encourage higher education institutions to have quality training and high-value certification programs placed on the State Eligible Training Provider List (ETPL). In doing so, adult and dislocated workers utilizing the state workforce system can receive training to earn high value manufacturing-related certificates through the one-stop centers.



An Urgent Call to Action

If as a country we are to raise our post-secondary attainment rates to meet the challenge Lumina Foundation set in its Goal 2025, a critical step is to have every state identify and set its own Goal 2025 as well. Mark Twain famously said, "Everybody talks about the weather, but nobody does anything about it." We can no longer talk about the skills gap, and we can do something about it.

Action is needed now, or in 10 years manufacturing and other critical sectors

will not be able to compete. Find out if your state has set a 10-year goal like the one in New Hampshire. If your state does not have a 10-year goal, then raise awareness and call for a state commitment to establish one. If your state has a 10-year goal, then make sure the needs of the manufacturing sector are being met.

Finally, Lumina has set up a Strategy Labs to support efforts like the one in New Hampshire. You can reach out and talk to them and find out where your state stands on the road to meeting Lumina's Goal 2025. **M**

Action is needed now on the education and skills front or in 10 years' time manufacturing will not be able to compete.



² *Five Ways that Pay Along the way to the B.A.*, September 2012, Carnevale, Jayasundera, Hanson, Georgetown University

³ *Ibid.*

⁴ *Carnevale, Anthony P., Stephen J. Rose, and Andrew R. Hanson. Certificates: Gateway to Gainful Employment and College Degrees.* Georgetown University Center on Education and the Workforce. Washington, D.C. (2012).